

### **THE OFFICE ACTION**

In the Office Action issued on October 5, 2004, the Examiner rejected claims 1-10 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 4,195,008 to Gruber ("Gruber")

### **REMARKS**

Applicants have carefully considered the Office Action issued on October 5, 2004. Applicants respectfully request reconsideration of the application in light of the following comments.

#### **A. The Pending Claims Are Not Obvious Over Gruber**

The Examiner rejected claims 1-10 under 35 U.S.C. §103(a) as being unpatentable over Gruber. Applicants respectfully traverse.

Gruber is directed to the grafting of ethylenically unsaturated monomers onto mineral oils, such as rubber compounding or extender oils. The grafted oil can be used to extend a latex copolymer to provide an adhesive for carpet backing. The monomer is an ethylenically unsaturated monomer such as acrylic acid, methacrylic acid, etc (col. 2, lines 45-66). The oils to be grafted are mineral oils and may include naphthenic or paraffinic type oils (col. 3, lines 23-28). The latex with which the grafted oil is extended is a COOH- containing polymer and may include SBR (col. 5, line 66-col. 6, line 63). The latex may be crosslinked using crosslinking agents including, e.g., urea-formaldehyde (UF) resins (col. 7, line 3-10). Gruber fails to render the present claims unpatentable for at least the following reasons.

First, Gruber fails to disclose or suggest the recited urea-formaldehyde/styrene-butadiene binder wherein the **UF resin** is prepared by adding a short-stop agent to the reaction system. In this respect, the Examiner has stated that "[t]he copolymers may be prepared in an aqueous emulsion system using conventional short stop agents." Applicants respectfully point out that this passage is with reference to the **latex polymer**, not the UF resin. This is clearly stated in

Gruber, where, in discussing the latex Gruber states that "these copolymers may be prepared in aqueous emulsion systems using conventional...short stop agents" (col. 6, line 34-38). Gruber fails to disclose wherein the UF resin itself is prepared using a short stop agent.

Second, Gruber only discloses wherein the UF resin is used as a crosslinking agent for the latex, not as a blended resin system with SBR. The present application makes it clear that the presently claimed modified SBR/UF resin system is an admixture of the two, resulting in a stable emulsion (paragraph 0027). The UF resin is not a crosslinking agent for the SBR, as this function is performed by other agents. In this respect, see paragraph 0020, which indicates the preferred presence of cross-linking agents such as N-methylol acrylamide in the SBR.

Because Gruber only discloses the use of a UF resin as a crosslinking agent, the Examiner's argument that it would have been obvious to vary the relative amounts of the SBR and UF resin is inapplicable. That is, a crosslinking agent is only added in an amount to effectively crosslink a polymer. The UF resin is not added to affect the physical properties of the SBR. One would not be motivated to modify the amount of the UF resin in Gruber, since only a very small fraction of crosslinking agent is normally needed to effect crosslinking. Such a large amount in fact would most likely impede the crosslinking reaction. For at least these reasons, Gruber fails to disclose or suggest the present invention and fails to render it obvious under §103.

### **CONCLUSION**

In view of the foregoing comments, Applicants submit that claims 1-10 are in condition for allowance. Applicants respectfully request early notification of such allowance. Should any issues remain unresolved, the Examiner is encouraged to contact the undersigned to attempt to resolve any such issues.

If any fee is due in conjunction with the filing of this response, Applicants authorize deduction of that fee from Deposit Account 06-0308.

Respectfully submitted,

**FAY, SHARPE, FAGAN,  
MINNICH & MCKEE, LLP**

Date: 26 October 2004

  
\_\_\_\_\_  
Scott A. McCollister , Reg. No. 33,961  
Joseph E. Waters, Reg. No. 50,427  
1100 Superior Avenue  
Seventh Floor  
Cleveland, OH 44114-2518  
216/861-5582